

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 (Currently Amended). A pipe comprising:

- a concrete cylinder possessing at least one annular end of determined longitudinal axis, defined by a longitudinal outside peripheral face and by a transverse front face;

- a female end ring coaxial with said end and secured thereto, the ring consisting of:

- firstly a longitudinal ferrule for securing to the cylinder, the ferrule being defined by a longitudinal inside peripheral face fitting snugly against said outside peripheral face in the immediate vicinity of said front face; and

- secondly a longitudinal skirt projecting longitudinally over said front face to engage coaxially on a male endpiece of another pipe,

wherein the ferrule is in a state of circumferential elastic tension providing sealing relative to said outside peripheral face by said inside peripheral face applying thereagainst transverse pressure which is circumferentially distributed in a continuous manner,

wherein said outside peripheral face and said inside peripheral face flare in the longitudinal direction going away from

said front face and relative to the transition between the ferrule and the skirt,

wherein said inside peripheral face presents one continuous annular sealing portion in relief facing said outside peripheral face in a state of compression thereagainst, formed integrally with the ferrule,

wherein said continuous annular portion in relief comprises a single rib which is substantially closer, longitudinally, to a free edge of the ferrule than to said transition, said free edge being longitudinally opposite said transition and

wherein said inside peripheral face is fastened to said outside peripheral face by annular adhesive between them.

2 (Previously Presented). A pipe according to claim 1, wherein said circumferential elastic tension is such that said inside peripheral face is fastened, in part, to said outside peripheral face by the mutual friction that results from said transverse pressure.

3 (Previously Presented). A pipe according to claim 1, further including at least one band coaxially surrounding the ferrule and placed in circumferential tension.

4 (Canceled).

5 (Canceled).

6 (Canceled).

7 (Canceled).

8 (Canceled).

9 (Previously Presented). A pipe according to claim 1, further including an annular sealing gasket of an elastically compressible material interposed in elastic transverse compression stress between said inside peripheral face and said outside peripheral face, at least in the immediate vicinity of said front face,

wherein said gasket is in the form of a film, and

wherein said film extends from said front face over a longitudinal dimension shorter than the respective longitudinal dimensions of said outside peripheral face and of inside peripheral face.

10 (Currently Amended). A pipe according to claim 9, wherein said outside peripheral face presents a localized annular setback in the immediate vicinity of said front face and in that said gasket is received over a fraction of its ~~transverse dimension~~thickness in said setback.

11 (Canceled).

12 (Canceled).

13 (Previously Presented). A pipe according to claim 9, wherein said inside peripheral face is fastened to said film by annular adhesive between them.

14 (Withdrawn). A pipe according to claim 11, wherein said film presents at least one continuous annular bulge spaced apart longitudinally from said front face by a distance which is shorter than the respective longitudinal dimensions of said outside peripheral face and said inside peripheral face causing an increase

in said tension and in said pressure that is localized longitudinally.

15 (Withdrawn). A pipe according to claim 14, wherein said continuous annular bulge corresponds to a continuous annular groove in said inside peripheral face.

16 (Previously Presented). A pipe according to claim 1, wherein the inside of the ring presents longitudinal abutment means for engaging said front face, the abutment means being located at the transition between the ferrule and the skirt projecting transversely relative to said inside peripheral face and being placed facing said front face.

17 (Currently Amended). A pipe according to claim 16, wherein the skirt also presents a longitudinal inside peripheral face, and in that the abutment means ~~also form a transverse projection relative thereto to serve~~ as a longitudinal abutment for said male endpiece.

18 (Previously Presented). A pipe according to claim 17, wherein the abutment means comprise a transverse annulus that is circumferentially continuous, and that presents a longitudinal dimension that is uniform.

19 (Currently Amended). A pipe according to claim 16, further comprising an annular sealing gasket interposed between said inside peripheral face of the ferrule and said outside peripheral face wherein said gasket is in the form of a film forming an annular rim extending transversely on said front face;

and in that the longitudinal abutment means press longitudinally against said front face via said rim.

20 (Previously Presented). A pipe according to claim 1, wherein the inside of the skirt presents a shape suitable for receiving and holding at least one transverse annular sealing gasket for engaging the male endpiece.

21 (Previously Presented). A pipe according to claim 20, wherein the inside of the skirt has at least one transverse annular sealing gasket fixed thereto for engaging the male endpiece.

22 (Canceled).

23 (Canceled).

24 (Canceled).

25 (Withdrawn). A pipe according to claim 1, wherein the ferrule is fastened to the cylinder by transverse pins that are regularly distributed circumferentially.

26 (Previously Presented). A female end ring for use in making a pipe, comprising:

- a longitudinal ferrule defined by a longitudinal inside peripheral face; and

- a longitudinal skirt situated axially in line with the ferrule,

the ferrule being elastically expandable circumferentially,

wherein said inside peripheral face flares in the longitudinal direction going away from the transition between the ferrule and the skirt,

wherein said inside peripheral face presents at least one continuous annular portion in relief that is compressible transversely and that is integral with the ferrule,

wherein said continuous annular portion in relief is in the form of a single rib, and

wherein said rib is substantially closer, longitudinally, to a free edge of the ferrule than to said transition, said free edge being longitudinally opposite said transition.

27 (Canceled).

28 (Canceled).

29 (Canceled).

30 (Previously Presented). A female end ring according to claim 26, further comprising abutment means on the inside at the transition between the ferrule and the skirt, the abutment means projecting transversely relative to said inside peripheral face.

31 (Previously Presented). A female end ring according to claim 30, wherein the skirt also presents a longitudinal inside peripheral face and in that the abutment means also project transversely relative thereto.

32 (Previously Presented). A female end ring according to claim 31, wherein the abutment means comprise a circumferentially continuous transverse annulus of uniform longitudinal dimension.

33 (Previously Presented). A female end ring according to claim 26, wherein the inside of the skirt is shaped suitably to receive and to hold at least one transverse annular sealing gasket.

34 (Previously Presented). A female end ring according to claim 33, wherein the inside of the skirt is integral with at least one transverse annular sealing gasket.

35 (Canceled).

36 (Canceled).

37 (Previously Presented). A female end ring according to claim 26, wherein the ferrule and the skirt present respective shapes and transverse dimensions suitable for enabling a plurality of rings to be nested releasably and coaxially by nesting the ferrule of one with the skirt of another.

38 (Currently Amended). A method of manufacturing a pipe, the pipe comprising:

- a concrete cylinder possessing at least one annular end having a longitudinal axis, defined by a longitudinal outside peripheral face and by a transverse front face;

- a female end ring coaxial with said end and secured thereto, the ring consisting of:

- firstly a longitudinal ferrule for securing to the cylinder, the ferrule being defined by a longitudinal inside peripheral face fitting snugly against said outside peripheral face in the immediate vicinity of said front face; and

- secondly a longitudinal skirt projecting longitudinally over said front face to engage coaxially on a male endpiece of another pipe,

said method comprising,

a) making the ring so that, at a predetermined longitudinal distance from the transition between the ferrule and the skirt, when the ring is not expanded circumferentially, said inside peripheral face has transverse dimensions that are smaller than corresponding dimensions of said outside peripheral face at the same longitudinal distance from said front face; and

b) engaging the ferrule coaxially on the annular end of the cylinder to a determined relative position in which said transition coincides longitudinally with said front face, and fastening the ferrule to the cylinder in said determined relative position by placing said ferrule in a state of circumferential elastic tension providing sealing relative to said outside peripheral face by said inside peripheral face applying thereto transverse pressure that is distributed circumferentially in a continuous manner,

wherein, ~~respectively during the initial step and during step~~
a), the ring and the cylinder are prefabricated in such a manner that at least one of said outside peripheral face and said inside peripheral face flare relative to their respective longitudinal axes in a longitudinal direction going away respectively from said front face and from the transition between the ferrule and the skirt, and that said inside peripheral face presents one continuous annular rib in relief, which is compressible, transversely, and formed integrally with the ferrule, said rib being substantially closer, longitudinally, to a free edge of the ferrule than to said

transition, said free edge being longitudinally opposite said transition,

wherein between steps a) and b), a ring of adhesive is deposited on a localized zone of at least one of said outside peripheral face and said inside peripheral face selected in such a manner that during and after engaging the ferrule on the cylinder, said zone constitutes a zone of mutual contact via said adhesive and of application of said transverse pressure, and that, as the ferrule is engaged coaxially on the annular end of the cylinder, when implementing step b), said rib facilitates the entrainment of said adhesive by the ferrule and the creation of a film thereof, and

wherein said adhesive serves as a lubricant during engagement of the ferrule coaxially onto the annular end of the cylinder, and subsequently serves to fasten them together.

39 (Previously Presented). A method according to claim 38, wherein said circumferential elastic tension is such that said inside peripheral face is fastened at least in part to said outside peripheral face by the mutual friction that results from said transverse pressure.

40 (Previously Presented). A method according to claim 39, wherein said friction is reinforced by banding the ferrule in said determined relative position.

41 (Previously Presented). A method according to claim 38, wherein coaxial engagement of the ferrule on the annular end of the cylinder during step b) is facilitated by heating the ferrule.

42 (Canceled).

43 (Canceled).

44 (Previously Presented). A method according to claim 38, wherein during step a) the cylinder is prefabricated in such a manner that said outside peripheral face flares more than does said inside peripheral face relative to their respective longitudinal axes.

45 (Canceled).

46 (Canceled).

47 (Previously Presented). A method according to claim 38, wherein between steps a) and b), a sealing gasket of elastically compressible material is put into place on said outside peripheral face at least in the immediate vicinity of said front face,

wherein said gasket is selected in such a manner that it is in the form of a film,

wherein said film is selected and placed in such a manner that it extends from said front face over a longitudinal dimension that is less than the longitudinal dimensions respectively of said outside peripheral face and of said inside peripheral face,

and wherein during step b), said gasket is put into elastic transverse compression stress between said inside peripheral face and said outside peripheral face.

48 (Previously Presented). A method according to claim 47, wherein, during step a), the cylinder is prefabricated in such a manner that said outside peripheral face presents a localized annular setback in the immediate vicinity of said front face, and in that between steps a) and b), said gasket is put into place by being received over a fraction of its transverse dimension in said setback.

49 (Canceled).

50 (Canceled).

51 (Currently Amended). A method according to claim 47, wherein between steps a) and b), after said film has been put into place, a-another ring of adhesive is deposited on at least one of a localized zone of said film and a-another localized zone of said inside peripheral face, selected in such a manner that during implementation of step b) and subsequently, said one zone constitutes a zone of mutual contact via said adhesive and of application of said transverse pressure, and that, as the ferrule is engaged coaxially on the annular end of the cylinder, when implementing step b), said rib facilitates the entrainment of said adhesive by the ferrule and the creation of a film thereof, ~~and~~

~~wherein said adhesive serves as a lubricant during engagement of the ferrule coaxially onto the annular end of the cylinder, and subsequently serves to fasten them together.~~

52 (Canceled).

53 (Withdrawn). A method according to claim 49, wherein said film is selected and placed in such a manner as to present at least one continuous annular bulge longitudinally spaced apart from said front face by a distance which is shorter than the respective longitudinal dimensions of said outside peripheral face and said inside peripheral face, so as to give rise to a longitudinally localized increase in said tension and in said pressure.

54 (Withdrawn). A method according to claim 53 wherein the hardness and the dimensions of said continuous annular bulge are selected and step b) is implemented in such a manner that in said determined relative position said continuous annular bulge causes a corresponding continuous annular groove to be formed in the inside peripheral face, by localized plastic deformation of the ferrule.

55 (Previously Presented). A method according to claim 38, wherein during step b) coaxial engagement of the ferrule on the annular end of the cylinder is stopped when a longitudinal abutment means mounted on said ferrule comes into abutment against said front face.

56 (Previously Presented). A method according to claim 55 wherein between steps a) and b), a sealing gasket in the form of a film is placed on said outside peripheral face and an annular transverse rim of said film is formed on said front face, and

in that during step b), said coaxial engagement is stopped when the longitudinal abutment means come into abutment against said front face via said rim.

57 (Previously Presented). A method according to claim 38 wherein in step a) or after step b), at least one transverse annular sealing gasket for engaging the male endpiece is secured to the inside of the skirt.

58 (Canceled).

59 (Canceled).

60 (Withdrawn). A method according to claim 38, wherein after step b) the ferrule is fastened to the cylinder by transverse pins that are regularly distributed circumferentially.